

# Indications and Histopathological Assessment of Hysterectomy Specimens

Gulfareen Haidar <sup>1</sup>, Farhana Anjum<sup>2</sup>, Seher Khowaja <sup>3</sup>, Abdul Majid <sup>4</sup>, Keenjher Rani,<sup>5</sup>  
 Rasheeda Hingoro<sup>6</sup>

<sup>1,2</sup>Associate professor, Gynae and OBS department of Isra University Hospital Hyderabad

<sup>3</sup>Senior lecturer, Anatomy department of Isra University Hospital Hyderabad

<sup>4</sup>Assistant Professor, Department of Pathology, Isra University hospital Hyderabad

<sup>5</sup>Assistant Professor, Department of physiology, LUMHS, Jamshoro

<sup>6</sup>Consultant Gynaecologist, Agha Khan hospital/Hyderabad/Sindh

**Correspondence:** Dr. Gulfareen Haider

Associate Professor, department of Obs & Gynae

Isra University Hospital Hyderabad

gfareen@yahoo.com

## Abstract

**Objective:** To determine the common indications and histopathological analysis of hysterectomy specimens of the patients who underwent hysterectomies.

**Methodology:** This prospective study was conducted at Isra University Hospital, Hyderabad; from November 2018 to October 2019. All the women who underwent hysterectomy and age more than 18 years were included. Hysterectomy samples were taken and kept in formalin 10% and were sent for histopathological examination. Data was collected by study proforma. Analysis of data was done by using SPSS version 20.

**Results:** A total of 100 patients were enrolled and most of the patients 40(40%) were in age group of 40 to 50 years. The commonest presenting complaint was excessive vaginal bleeding in 65(65%) patients, 35(35%) complained of something coming out from vagina, and 20(20%) patients were feeling mass in the abdomen. The most frequent indication of hysterectomy was fibroid uterus in 40% of cases, followed by utero-vaginal prolapse was in 20% and abnormal uterine bleeding was in 15% of patients. Out of all cases, 80% cases underwent abdominal hysterectomies and in 20% cases hysterectomies were done vaginally.

**Conclusion:** The observation fibroid, uterovaginal prolapse and dysfunction uterine bleeding were found to be the commonest indications. Leiomyoma, adenomyosis, serous cystadenoma, and chronic cervicitis were the commonest histopathological findings. However endometrial carcinoma was found to be 4%.

**Keywords:** Hysterectomy, Causes, Carcinoma

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## Introduction

After a caesarean section, surgical evacuation of the uterus or hysterectomy is the 2nd most widely done major surgical operation in females, globally.<sup>1</sup> The reasons for hysterectomy range from benign conditions to genital tract cancers. Since the early 20th century, it

has been used to treat multiple pelvic pathologies such as dysfunctional uterine bleeding (DUB), leiomyoma, adenomyosis, chronic pelvic pain, prolapse, endometriosis, and malignant conditions. In Manchester, England, Charles Clay undertook the initial subtotal hysterectomy in 1843, and the initial total

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abdominal hysterectomy in 1929.<sup>2</sup> Hysterectomy could be the complete hysterectomy that involves complete elimination of the uterus, cervix, and fundus; or partial/subtotal hysterectomy that involves the elimination of uterine body yet preserving the cervix intact, which is also known as a supracervical hysterectomy. The most famous types of hysterectomy are abdominal hysterectomy, laparoscopic hysterectomy, and vaginal hysterectomy. Hysterectomy carries a 30-40% chance of death throughout one's life.<sup>3</sup> The prevalence of hysterectomy varies by geographical region, patient preferences, local gynecological surgeons' practice, and training trends. The pathology must always be confirmed histopathologically, and the indications for conducting this major surgical procedure must always be explained. This is because hysterectomy is a major surgical procedure with physical, medical, psychological, sexual, and financial implications for women. To determine the necessity of a hysterectomy, histopathological examination and evaluation are needed. This research aimed to determine the multiple hysterectomy indications and associated histopathological findings.

## Methodology

This prospective study was conducted in Obs & gynae department of Isra University Hospital Hyderabad. The study was conducted during six months from November 2018 to October 2019. All the women who underwent hysterectomies and age more than 18 years were enrolled in this study. Women already known with uterine histopathological and those who did not agree to participate in the study were excluded. All the study subjects underwent surgical hysterectomies, after taking informed consent. Hysterectomy samples were taken and kept in formalin 10% and sent for histopathological examination. Data was collected by study proforma. Analysis of data was done by using SPSS version 20.

## Results

A total of 100 patients were included in the study. The majority of patients 40 (40%) were in age group of 40 to 50 years, while 35(35%) patients were in the age group of 30-40 years. The most common presenting complaint in our study was excessive vaginal bleeding which was observed in 65(65%) patients, 35(35%) complained of something coming out of vagina and

20(20%) patients presented with mass in the abdomen. (Table I)

**Table I: Age groups of patients (n=100)**

Age groups	N (%)
< 30 years	5(5%)
30-40 years	35(35%)
40-50 years	40(40%)
>50 years	20(20%)
Common presenting complaints	
Excessive menstrual bleeding	65(65%)
Something coming out of vagina	35(35%)
Abdominal mass	20(20%)
Post-menopausal bleeding	18(18%)

The most common indication of hysterectomy in our study was fibroid uterus, which was seen in 40(40%) patients, followed by uterovaginal prolapse in 20(20%) patients and dysfunctional uterine bleeding was seen in 15(15%) patients. (Table III)

In our study, majority of hysterectomies 80(80%) were done via abdominal route, while 20(20%) hysterectomies were done vaginally. (Table II)

**Table II: Indications of hysterectomy.**

Indication	N (%)
Fibroid uterus	40(40%)
Uv prolapse	20(20%)
Ca ovary	12(12%)
Ca endometrium	5(5%)
Ca cervix	2(2%)
Benign ovarian mass	6(6%)
DUB	15(15%)

The most common histology was leiomyoma, which was seen in 29(29%) patients; 18(18%) of patients had adenomyosis; 10(10%) had serious cystadenoma; however in 20(20%) of the patients no pathology was seen. (Table III)

**Table III: Histological findings**

Histological findings	N (%)
Leiomyoma	29 (29%)
Adenomyosis	18(18%)
Endometrioid carcinoma	4(4%)
Serous cystadenoma	10(10%)
Mature cystic teratoma	8(8%)
Serous cystadenocarcinoma	2(2%)
Chronic cervicitis	6(6%)
Cervical polyp	3(3%)
No pathology	20(20%)

## Discussion

Globally, hysterectomy is a prevalent surgical procedure during perimenopausal years of women in gynaecology.<sup>4</sup> The histopathological assessment of surgically conducted uterine biopsies is useful for both the diagnosis and the treatment.<sup>5</sup> This research aimed to examine the histopathology associated with the lesion of a specimen undergoing hysterectomy. In our study, the majority of patients 40(40%) were from the age group of 40-50 years, followed by 35(35%) patients in age group 40-50 years. In comparison to our results, in a study conducted by Harshal A. et al.<sup>6</sup> most study subjects were aged from 41 to 50 years. Rather GR et al.,<sup>7</sup> also reported similar findings.

In the current study, most of the hysterectomies 80% were conducted via the abdomen, whereas 20% of hysterectomies were done vaginally. In the comparison to our findings, Domblae V.<sup>8</sup> reported that 69.6% of study subjects underwent abdominal hysterectomies, while 30.4% of the women underwent vaginal hysterectomies. Analogous findings were reported by Ajmera et al.<sup>9</sup> and Abdullah et al.<sup>10</sup>

In the present study, the most common presenting complaint was excessive vaginal bleeding, which was observed in 65(65%) patients, whereas 35(35%) complained of something coming out of vagina, and 20(20%) patients presented with mass in the abdomen. Menorrhagia is typically correlated with benign pathologies, where malignancy is a rare exception. Shergill reported abnormal menorrhagia (66%) as the most frequent presenting complaint in study subjects who experience hysterectomy.<sup>11</sup> Hysterectomy is a typical surgical intervention for menorrhagia. In most regions of Pakistan, it would be the only surgical alternative readily accessible for menorrhagia when the patient shows no response towards medical treatment. It provides a high satisfaction score in patients and is the last line therapy for most medical conditions of the adnexal and uterus, such as adenomyosis, leiomyomas, and DUB.<sup>12</sup> In contrast to our findings, Amin A et al.<sup>13</sup> observed that the most frequent presenting symptoms were excessive and abnormal menstrual bleeding in 65 (52%) of study subjects, and 37 (30%) of the study subjects reported something flowing out of vagina. Other complaints included abdominal mass among 12 (9.8%) of study subjects and postmenopausal bleeding among 4 (3.3%) of the study subjects. According to another report by Abid N et al.<sup>14</sup>, menstrual irregularities were the most frequent

presenting symptom, followed by pain in the lower side of the abdomen. Hysterectomy involving bilateral salpingo-oophorectomy was undertaken in 75% of study subjects. Hysterectomy was undertaken all alone in 15% of study subjects, and vaginal hysterectomy was undertaken in 10% of study subjects. Fibroid uterus was the leading cause of hysterectomy among 35% of study subjects, followed by DUB in 15% of study subjects. Another study reported Irregular and excessive menstrual bleeding in 65 (52 %) study subjects as the most frequent presenting symptom, followed by something flowing out of vagina among 37 (30%) study subjects. For hysterectomy, fibroid uterus remained the most frequent reason, and uterovaginal prolapse remains the next most frequent reason. According to Qamar-un-Nisa et al.<sup>15</sup> and Iftekhhar R et al.<sup>16</sup>, menorrhagia (30%) was the most frequent complaint due to fibroid uterus and fibroid uterus itself was the most frequent histopathological finding (30%).

In the current study, leiomyoma was the most frequent histology seen in 29(29%) patients. In 18(18%) patients there was adenomyosis, 10(10%) had serious cystadenoma, while in 20(20%) patients no pathology was seen. In comparison to our results, the findings of Baral R et al.<sup>17</sup> showed that histopathology involving diagnosis revealed Leiomyoma among 127 (48.6%) study subjects, Adenomyosis in 27 (10.3%) study subjects, Endometrioid Adenocarcinoma among 3 (1.14%) study subjects. Koilocytotic variations were seen in 6 (10.7%) cases of chronic cervicitis. Endometriosis was the most frequent pathology observed in ovary among 10 (3.8%) study subjects, followed by Mature Cystic Teratomas among 9(3.5%) study subjects, Serous Cystadenomas among 9 (3.5%) study subjects, and Mucinous Cystadenomas among 5(2%) study subjects. Neoplastic disorders such as Serous Cystadenocarcinoma were observed in 3 (1.2%) study subjects, immature teratoma and Krukenberg tumor were also observed in 2 (1%) study subjects. Adenomyosis remained the second most prevalent uterine pathology, which was observed in 18 (19%) study subjects. Most other national trials yielded comparable findings.<sup>18</sup> Most international researches found comparable findings, as an Indian study reported 26% prevalence and a Tunis study reported 14.5% prevalence.<sup>19</sup>

## Conclusion

The latest research focuses on numerous histopathological modifications observed in

hysterectomy samples. When hysterectomy samples are examined histopathologically, several forms of lesions are observed. To ensure optimal postoperative management, each hysterectomy sample must be studied.

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